

# RESERVE STUDY

## GUIDE FOR Board Members & Property Managers



RESERVE DATA ANALYST

[www.reservedataanalyst.com](http://www.reservedataanalyst.com)

# Introduction

This latest version of this eBook (2022) has been put together to help bring some clarity to the Board Members and Property Managers who have an interest in all things related to Reserve Studies. I have tried to touch on the topics that most often come up without getting too in-depth with concepts, math or gray areas that can be confusing for those who do not deal with them daily. Please feel free to download and share this eBook, use it as a reference tool or simply as a cheat sheet at the next Board meeting.

This book is easily navigable by utilizing the Table of Contents. You will find **\*\*Reserve Analyst Tips\*\*** throughout this document.

Is there anything additional you would like included or answered? Just let me know and I can add it to this book. This is an evolving project so please help me help you!



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# What is a Reserve Study



A reserve study is a report that outlines the common area components that are the responsibility of an Association, as well as the expected replacement costs associated with them over a specific period; a 30-year timeframe is typical.

A reserve study will provide a replacement schedule for these common area components (e.g., roofing, paint, windows) as well as indicate how much an Association will need to set aside now and annually to have enough for these future obligations. Below is a list of what you will typically find in a reserve study:

- Summary of the funding models and a measure of adequacy of the reserve account (Percent Funded)
- A list of common area components which are the Association's responsibility
- Current and future expected costs related to these component projects
- Useful life and remaining useful life of components
- A timeline of the expected repair and replacement of these components
- Numerous funding plans that meet statutory requirements, client goals and any specific reserve analyst recommendations

# Why is a Reserve Study Important?



A comprehensive reserve study will help guide an Association's Board in their funding and budgeting decisions related to the reserve account and how much is adequate to allocate to the reserve account to meet the long-term obligations of the community. Without a reserve study that provides a clear list of obligations, costs, and a timeline of estimated expenses, a Board is left to make guesses as to how much to allocate to a reserve account.

## *Fairness to Community Membership*

A reserve study will provide funding scenarios which fairly distribute the costs among all the community members (current and future) so that current members are not underpaying or overpaying their share to the reserve account. This is an extremely important concept and has the additional benefit of reducing the likelihood for reliance on special assessments or loans. If everyone pays their fair share to the reserve account, when costs occur, there will be enough in the reserve account. A reserve study takes inflation into account as well as changes in costs, so that as time moves on and updates to the reserve study are completed, the Board will have a reserve study that can be relied on to continue to appropriately and fairly distribute the cost estimates. Remember, inflation causes the dollar to lose value over time so future owners will be paying a higher dollar amount but an equal share of the total cost if a funding model is followed that fairly distributes the project cost. Another way to look at it is that everyone pays for their share of the deterioration of the component, annually.

### ***Fiscal Responsibility***

Boards have a legal and fiscal responsibility to the community membership in common interest communities. According to most community governing documents and legal requirements, Boards must strive to maintain and adequately prepare for costs related to common area obligations. Refraining from adequately preparing for or making poor decisions which place the Association in a poor financial position can open the door to legal liabilities, lawsuits, and community membership which loses confidence in the Board. Obtaining the services of a reserve study company shows a community the Board is serious about the matter and is a first step in following a path of fiscal responsibility.

### ***Community Appeal and Values***

For the long- term health of a community, appeal of the units/homes in that community and to protect property values, a long-term funding plan that can be utilized over many years and by changing Boards, makes a reserve study extremely important. A community that relies only on guesswork is also one that will typically rely on special assessments, loans, and deferred maintenance issues - all of which negatively impact the appeal and values within the community.

### ***Financing***

As Lenders have become much more knowledgeable about reserve accounts and the process in which the accounts are funded, they have become much stricter in their lending guidelines. Fannie Mae, Freddie Mac, and FHA all have requirements with regards to how much of the budget must be allocated to the reserve account. They have been enforcing these guidelines and often require a copy of a recent (last 12 months) reserve study by an independent professional to verify the guidelines are being met. This has consistently been the case over the last several years with respect to purchases, sales, refinances, and loans to the Association for projects within the community.

# Hiring a Reserve Study Professional



There are many reserve study companies to choose from, so to narrow the list down to several that are likely to provide reliable bids and comprehensive studies to the community we recommend following the below suggestions:

## *Step 1 – Ask your Associates/Board Members*

We have found the best predictor of future performance is past performance. A company that has provided accurate bids, has shown up on time, has treated all parties with professionalism and has provided top-quality products is likely to do the same in the future. Other Property Managers or Board Members will be able to provide their experience with different reserve study companies and with different property types. This is a great starting point.

## *Step 2 – Look for Experience*

Companies that have reserve analysts that have years of experience will often be able to provide a more comprehensive reserve study, as they will have more experience with various property types and will likely have seen a community just like the one you are managing or living in. This helps to ensure the component list is more accurate and the funding models are more appropriate.

### ***Step 3 - Look for a Designation***

There are two designations in the reserve study industry that are widely accepted as helping to elevate the industry standards and professionalism. The Community Associations Institute (CAI) has the Reserve Specialist (RS) designation, and the Association of Professional Reserve Analysts (APRA) has the Professional Reserve Analysts (PRA) designation. A designation ensures the reserve analyst is following ethical and industry specific criteria in providing comprehensive and reliable reserve studies to common interest communities. Obtaining these designations requires a significant amount of work-related experience, references, peer review, and ongoing educational requirements to keep up on industry trends.

Be sure the reserve analyst completing the study has a designation, as some companies hire inexperienced staff to complete the site inspections and write up the reports, relying on the more experienced and designated staff to review all their work from the office. While this business model is more profitable for the person who owns the reserve study company, the final product is usually less accurate than if an experienced reserve analyst completed the work from start to finish. It is just too easy to miss components or specific concerns without being on site. It is an unfortunate and common scenario we find in many reserve studies we see. Remember, the component list is the foundation of the reserve study, so if that is not accurate, the remainder of the study can have significant flaws.

### ***Step 4 – Find Local Professionals***

In our experience there have been many reserve study companies that appear and then disappear never to be seen again. These are usually out of state reserve study companies that are run by people getting into the field to make ends meet before going back to their usual industry. Often, they are contractors, engineers, architects, builders, etc., who are not familiar with many of the concepts of the local statutory requirements or National Reserve Study Standards. We have seen many reports that do not even meet the minimum statutory requirements for a reserve study but were marketed as comprehensive and done by a professional. Additionally, when questions arise or revisions are requested, many communities have a difficult time getting answers in a timely manner, if at all.

### ***Step 5 – Confirm Turn Around Times***

Often reserve studies are ordered at the last minute and are needed by specific dates, such as a Board Meeting or to comply with the end-of-year disclosure requirements. Let the reserve study company know of the date the study will be needed and confirm they will be able to meet this deadline. This ensures that you as a Manager or Board member have done your due diligence. Reserve study companies can often get backed up during the summer and fall months, so make sure you let them know of the deadline you are seeking.

### ***Step 6 – Confirm the Reserve Studies Meet Statutory Requirements***

Even though laws have been passed in many states related to reserve studies, we still regularly see reports that do not meet these minimal requirements. A reserve study that does not meet the minimal requirements is likely not going to provide the community with the necessary information to complete the annual disclosure requirements to the community membership. In the end, this will be a negative reflection on you as a property manager or Board members have entrusted you to find qualified and professional vendors.

# Document Review



The reserve analyst completing your reserve study will review blueprints, community maps, and the community's governing documents to interpret what is listed as an Association's obligation and review the financials with regards to the reserve account to complete a study that is most helpful to the Association.

## *Governing Documents*

Community governing documents will have an explanation of what are considered common areas, limited common areas, limited use areas or limited common elements amongst other labels or definitions of the community area. There will typically be an explanation of what the different common areas are defined as and a maintenance schedule indicating who is required to pay for the maintenance and repair/replacement of such areas (e.g., Unit Owner or Association).

When reviewing the governing documents of a community such as the Bylaws, Declarations and Covenants, there may be common areas that are left out, not fully explained, or vague with respect to whom is obligated to repair/replace them. When we encounter this scenario, we will ask the Board how they have historically treated the common area in question and then utilize that prior history as precedent for the reserve study. Additionally, we always suggest the Board utilizes the services of an attorney for clarification and interpretation of the governing documents in question. If a revision to the reserve study is needed, we can do so or incorporate the findings into future reserve studies for the Association. It is not uncommon for changing Boards to also have changing opinions as to what is to be included as an Association responsibility.

Your reserve analyst will not make an interpretation of your governing documents as this is best handled by an attorney familiar with common interest community law. On larger communities the inclusion or exclusion of a building component can literally be a million or multimillion dollar question.

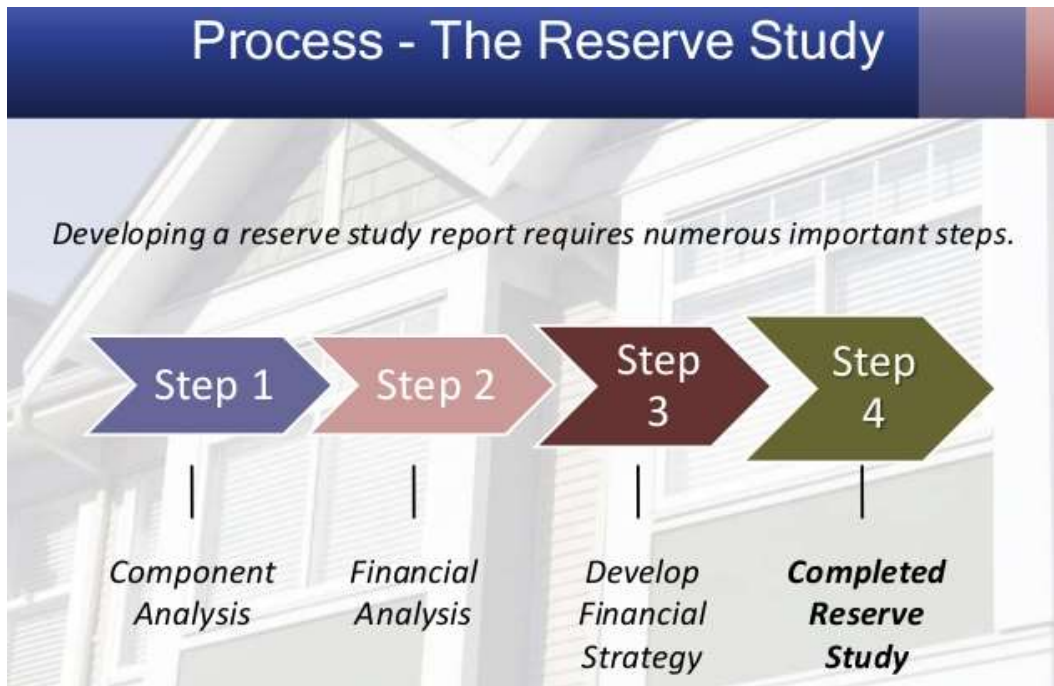
### ***Financials***

The reserve analyst will also need to review financial information regarding the reserve account in order to create a reserve study that is most beneficial to an Association. Typically, the reserve analyst will need to know, at a minimum, the reserve account balance, the current and/or expected reserve account allocation rate and any special assessments or loans that have already been implemented or anticipated.

### ***Bids, Invoices, Work Orders***

Additional documents, such as bids from vendors, invoices for past work performed or work orders are very helpful to the reserve analyst who can then incorporate these actual costs into the reserve study. Utilizing actual cost figures will lead to a more accurate and well documented reserve study for the Board to rely on. It is important to remember that without actual costs figures, the reserve analyst will be utilizing average costs (from experience, other bids, cost manuals, etc.) which can vary significantly from actual costs to the community for a specific project.

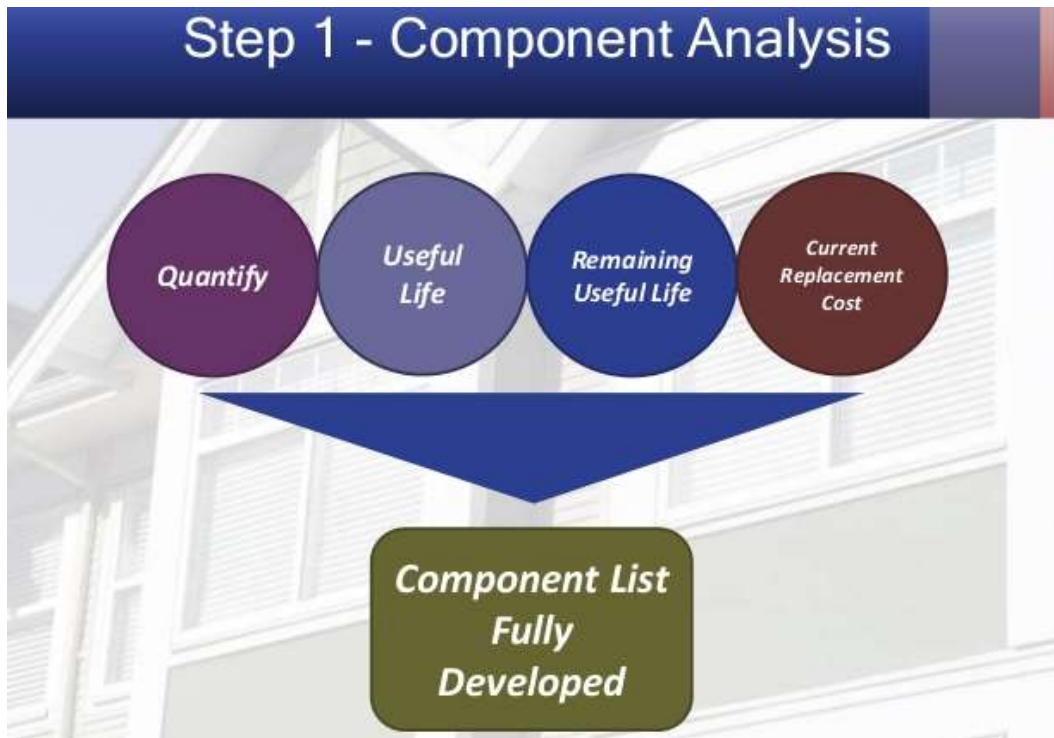
# The Reserve Study Process



A reserve study completed by a reserve study professional will be done in numerous steps. Each of these steps is extremely important and will ensure a comprehensive and catered reserve study report in the end. It is important to remember that a reserve analyst will build on their initial site inspection findings and research to develop a completed reserve study with many different aspects. At each step, the reserve analyst will be making assumptions about certain things like inflation, past replacement dates, or replacement schedules. Therefore, it is so important to provide as much information to the reserve analyst as possible, including past component project dates, invoices, bids, past historical replacement cycles (e.g., how often paint has been completed). The more information the reserve analyst has, the more accurate these assumptions will be and the more catered and useful the reserve study will be for your community.

Over the next several pages we will dig a little deeper into each step of the study, so that a basic understanding of the process can be formed.

# The Component Analysis



The component analysis is the first step in the reserve study. This step involves completing a site inspection, determining what components to include in the study, quantifying the components, evaluating the common area components for useful life and remaining useful life and determining the current cost for the common area components.

Because the remainder of the study is based on these findings, it is extremely important that the reserve analyst compiles an accurate list of components, accurate cost figures, and accurate useful life/remaining useful life of the components. This component list should be reviewed closely by the Manager and/or Board to make sure it is in line with the Association's governing documents and the historical way the components are treated when there are grey areas in the governing documents. A large error in the component list can have a significant impact on the funding plans developed for an Association.

We regularly come across reserve studies that are missing significant expenses that may not be apparent to Board Members or Managers. Such components that are “out of sight” are often excluded from a reserve study without any knowledge to the reader of the report. Some of these “out of sight” components have an extremely high cost related to them and should always be included in the reserve study if the Association is responsible for them. Examples include underground sprinkler piping replacement, sewer/water pipes repairs/replacement, waste and drain line repairs/replacement, asphalt resurfacing, pond liner replacement, lanai refurbishment, etc.

### *What Components to Include*

Determining what components to include in a reserve study is the first step in the component analysis. Based on a review of the governing documents, interviews with Board Members, statutory requirements and applying the four-part test outlined in National Reserve Study Standards, the reserve analyst will be able to create a comprehensive reserve study list. The four-part test outlined in the CAI’s National Reserve Study Standards is listed below:

- The component is an obligation of the Association.
- The component has a limited useful life expectancy.
- The component has a reasonably defined remaining useful life.
- The cost of the component is above a minimum expense threshold set by the Association.

Typical common area components that will be seen in a reserve study include:

- Roof Replacement
- Fencing Replacement
- HVAC Equipment Replacement
- Asphalt Overlay / Sealcoat
- Siding Replacement
- Paint
- Pool Re-plastering
- Lighting Replacement

The above four-part test covers most components in a community. However, there are gray areas which will require some additional due diligence by the reserve analyst. Gray

areas can include components that are not clearly defined or mentioned in the governing documents. In these scenarios, we will typically consider how the component(s) have been historically treated by the Association, based on how they have interpreted their governing documents and then utilize that historical precedent in the reserve study.

### *What Common Area Components to Exclude?*

Some common area components may be excluded from the study or be included in the component list as an “Unfunded” component and removed from the mathematical models. These components will typically fall into one or more of the categories listed below:

- Below Threshold Costs - Component repair and/or replacement costs that are deemed too small to be considered capital expenses and are typically covered in the operational or maintenance budget of the Association typically are not included in a reserve study. Minimal threshold costs are determined by the Association or by the reserve analyst based on the typical minimal threshold costs for similar sized communities.
- Operational Expenses - These occur at least annually and can be effectively budgeted for each year. They are characterized as being reasonably predictable both in terms of frequency and cost. Operational expenses include all minor expenses which would not otherwise adversely affect an operational budget from one year to the next. Examples can include lawn care, pool cleaning, and janitorial services.
- Very Long or Unpredictable Useful Life Expectancy - Components which, when properly installed and maintained, have a very long useful life and which cannot be accurately predicted, will typically be excluded from a reserve report. These components may require maintenance and upkeep which are typically funded from the operational budget of the association.
- Unit Improvements - Improvements made to the property that fall within the Governing Documents’ unit description summary (Unit Owner’s responsibility), are not typically considered to be community owned or the responsibility of the

association.

- Other Non-Association Owned - Improvements installed on the property but owned by other parties such as governmental agencies, utility companies, the US Postal Service, etc., are not included in a reserve study. The replacement and maintenance of these improvements are not typically the responsibility of the Association.

### *Site Inspection*

The site inspection can last anywhere from several hours to several days depending on the size of the community and the number of common area components to evaluate and quantify. The reserve analyst will be taking large amounts of pictures, notes, and measurements so that an accurate component list with quantities can be included in the reserve study.

The visual inspection of the components is done to quantify the association-maintained components (common areas), determine an estimated useful life, remaining useful life, and to complete a basic visual condition assessment. This visual inspection is not a building inspection and there is no deconstructive or invasive testing conducted - issues that are not apparent from a visual inspection will not typically be known. It is important to remember that a reserve study is for cost and budget planning and should not be a substitute for an engineering report, building inspection, or code compliance inspection all of which are all well beyond the scope of a reserve study. Anytime there are concerns with a building or ground component, we recommend a qualified professional inspect the component to determine the scope of the issue and the cost to repair it—then it can then be incorporated into a reserve study.

### *Component Cost and Useful Life*

The costs and useful life data of components are the foundation on which the remainder of the reserve study is based. All recommended financial models are directly impacted by the estimated current and future costs for the component repair/replacement projects. Inaccurate data during the component analysis portion of the reserve study will likely lead to inaccurate projections in the future and funding models which may not meet the goals of the community or statutory requirements.

### *Where do the Cost Data and Useful Life Come From?*

Cost data and useful life both have significant impacts on the funding recommendations and long-term timeline of projected expenditures in the study. Every effort is made to include a prior replacement schedule or make an educated estimate based on the following:

- *Prior Studies* - The most reliable data we have is a database of thousands of prior reserve studies. Many of these have invoices and bids from vendors that were reviewed and included as actual cost data in these prior studies. Our database is updated regularly to reflect actual cost data from vendors for all types of building and ground components. The useful life of components is also listed in these prior studies and are specific to each community as we assign a “placed in service” data for each component. For example, when a composition shingle roof lasts about 25 years for most buildings we encounter, this is a good sign that it will also last approximately 25 years on your building.
- *Cost Manuals* - We also regularly utilize cost manuals such as RS Means and Marshall & Swift-- both of which are extremely accurate, updated quarterly, and very specific all the way down to the zip code. These cost manual companies interview thousands of vendors for many thousands of grounds and building components to determine average costs and then provide them in very comprehensive cost manuals. We have found these to be extremely accurate. Architectural, engineering, and to a lesser extent, cost manuals, also supply useful life of components data. These are based on interviews with vendors who deal with these materials daily, as well as manufacturer indicators related to warranties and in-house tests for longevity.
- *Client History* - When we complete a reserve study for our clients, we ask for any relevant bids, vendor invoices and known historical expenses so that we can incorporate these into the reserve study. These are generally reliable except for some that did not obtain numerous bids and overpaid or hired a vendor who has provided a bid for work that is less than the recommended standards (e.g., one sealcoat layer versus the recommended two). The reason vendors provide high or low bids are numerous and can include: they do not really want the job (too big or too small; they are too busy, they lack the necessary equipment (e.g., high bid to purchase or lease equipment); not experienced with some aspect of

the job, etc. In our experience, the most accurate indicator of the useful life of a component is the prior history of that component in a specific community. All site characteristics and building designs are different and materials will wear at slightly different rates (e.g., if the roof on a building has been replaced at 20 years twice prior, we will likely fund for replacement at 20 years again.) Many variables impact useful life of components including sun exposure, rain, wind, sand/dust, wooded area, desert climate, arid, humid, etc. The more information we have regarding the historical timeline of replacement of components the more accurate and catered the reserve study will be.

### ***How is the Remaining Useful Life of Components Determined?***

Remaining useful life of components is based on the placed in-service data (client historical records) as well as the comprehensive on-site visual inspections. Typically, an experienced reserve analyst will have a good read on the remaining useful life for more typical components such as roofing, siding, fencing, paint, and asphalt as they have seen these components thousands of times prior and are familiar with the different condition levels during the life cycle of these more common components. Mechanical equipment can be much tougher to determine just by looking at it so we will often rely on serial number data to determine manufacturing dates.

### ***Hidden Systems / Components***

There are also components that are completely out of view such as plumbing, electrical, drainage systems, etc. These are much more difficult to place a condition assessment on or determine costs and determine the remaining useful life for the element. Often, the reserve analyst must rely solely on data provided to them from the Association or Management Company. These types of components are often addressed with a contingency in a reserve study based on the prior history of repair for the component. (e.g., if the community has averaged about \$5,000 every 3 years in plumbing repairs, in recent history, that would be a good projection or starting point to budget for the future). Revisions to the costs and remaining useful lives can always be made in updates to the reserve study. If repairs become more costly or the client has a professional analysis of the systems completed (determining a scope, timeline and costs for large scale replacement of these hidden systems) then the reserve analyst can incorporate these findings and recommendations in the reserve study update.

# The Financial Analysis



The second step in the reserve study is the financial analysis--which utilizes the findings and research in the component analysis to project out costs and develop funding plans that an Association can follow. Additionally, the reserve study will indicate the current adequacy of the level of reserves for an Association versus an ideal reserve account balance based on its future obligations. This is known as "percent funded" and is generally a good indicator of the financial strength of a reserve account. We will dig a little deeper into the financial analysis in the next few pages.

## *Goals of the Reserve Analyst*

In developing funding plans for a community, a professional reserve analyst will follow National Reserve Study Principles. These four principles are listed below:

### **1. There are adequate reserves when needed.**

The recommended funding plan will consider the fact that some years will have dramatically higher expenses than others (often referred to as peak or threshold years). The overall financial model should result in a reserve account balance that is large enough to cover expenses in all periods of time. There is little need for a reserve funding model that results in an Association's failure to meet its fiscal responsibility to the membership. Implementing a funding plan developed by a designated reserve analyst will likely result in a positive reserve account balance and adequate funding for those common areas covered in the study.

### **2. The budget should remain stable across years of changing membership and Boards.**

Costs related to common area projects fluctuate wildly from one year to the next, sometimes with minimal expenses for a decade or longer. The reserve analyst will develop a strategy that fairly assesses reserve contribution dues, while remaining stable, requiring membership to pay their fair share over time. Often an allocation rate increase that matches the inflation rate is adequate and is considered a "stable" annual increase to the reserve allocation rate. Note this stable budget concept does not mean there should be no increases to the allocation rate, in fact the exact opposite is true. A *stable* increase of 3% per year follows this concept (typical to offset inflation) whereas wide variances such as 1% one year and 10% the next is not fair to the membership in either year.

### **3. The costs are fairly distributed to the membership.**

The cost to replace the common areas should be fairly distributed across years of membership in a community (current and future members). An adequate reserve allocation rate to the reserve account on an annual basis ensures the community

members are paying their fair share of the deterioration of the components. The costs may fluctuate wildly over a 30-year period, but if the reserve study is updated annually, the Association will be able to assess a fair amount to the membership in any given year and be adequately prepared for common area replacement expenses when they arise.

**4. The financial strategy must allow the Association / Board to be fiscally responsible.**

The membership of a community is counting on the Board to make good long-term budgeting decisions. A financial strategy that removes reserve funds to pay for a large capital improvement (e.g., construction of a recreation building) is not a fiscally responsible decision and does not follow the concepts of the National Reserve Study Principles. A reserve analyst will develop a plan which the Board can rely on and implement. The result is a community that stands on solid financial ground.

# About Percent Funded



Percent funded is a measurement of the financial health of a community with respect to its reserve account balance. Essentially, it is the calculation of how much the community has in the reserve account versus how much it ideally should have at a point in time. This figure can be helpful for community membership, Boards, and outside parties such as lenders / buyers to help them see the current financial health of the reserve account.

However, percent funded is only part of the entire picture in a reserve study. Additionally, there are graphs, charts, projections, and a cash flow analysis for all the funding plans provided in a comprehensive study. Just because a community has a high percent-funded level today, does not mean it will continue that way into the future. Large expenses will often drive down the percent funded level, so it is important to review the projection of the expenses and the cash flow analysis in the study to see how a community's reserve account balance is impacted during time periods of large expenses.

Typically, one of the goals of the recommended funding plan in a reserve study is to increase the reserve account balance and the percent funded to a high (above 70%) percent funded range within the time frame covered in the report.

### *Percent Funded Ranges*

The goal of the reserve study is to guide the Association toward a path of becoming fully funded over the 30-year period covered in the study. The different ranges in levels of funding are explained below.

#### *70-100 % Funded – Good*

At this level, the reserve account is considered to have a good or high level of funding. The risk for reliance on special assessments, loans, and deferred maintenance is minimized. While the goal is to reach and remain at the 100% funded mark, the actual funding level will likely fluctuate above and below 100% due to changing component expenses in any given period covered in the reserve study.

#### *30 – 70 % Funded - Fair*

A reserve account that is funded at the fair level is typically one on the right path to a more adequately funded level, but one that can also run into trouble if large expenses arise such as unexpected component failures or rapidly rising costs, specifically in years when large expenditures come to fruition. Additionally, it is important the Association is vigilant with their goal to reach a high percent-funded level as there is often pressure to reduce monthly member dues or to utilize money elsewhere when the reserve account balance grows to a level which is perceived to be large. Boards often have difficulties in continuing with long-term goals in years of economic downturn when much of the community seeks lower dues or a reduced allocation to the reserve account.

#### *0 – 30 % Funded – Poor*

A poor funding level often forces an Association to rely on special assessments and/or loans. With insufficient funds, the Association may not be able to meet predictable common area expenditures. At this level of funding, many communities choose to ignore condition deficiencies over time and suffer from significant deferred maintenance issues which in turn hurt marketability in the community. It is important to realize that a reserve account can often stay within a poor funding range for many years or even decades before any apparent negative impact is realized. The reality of the financial position of the reserve account will often become apparent in "peak" expense years when one or more large expense component projects occur (e.g., roofing, asphalt, siding, windows) which will require special assessments to be implemented or loans secured. Communities are often "surprised" by project expenses which may only

happen every 20 – 30 years or longer. An experienced reserve analyst will be able to determine what component project expenses will be coming due and appropriately create funding models to address these costs years in advance of their likely failure.

**\*\*Reserve Analyst Tip\*\***

If your Association has a goal, such as reaching a certain percent funded range within a specific period or reaching a percent funded that complies with FHA approval; let the reserve analyst know so these goals can be incorporated into one of the funding models in the reserve study. This could be for lending/financing purposes or just to hit targets set by the Board. The reserve study should be a tailored document that considers both client goals and statutory requirements.

# About the Fully Funded Balance

A fully funded balance is a reserve account balance that is equal to the estimated accumulated deterioration of the Association's common area components. As common area components grow older, they deteriorate until they no longer perform their intended function, at which time the component is fully deteriorated and must be replaced. The fully funded balance is the estimated monetized amount that will match this deterioration to the assets at any specific point in time.

## Example

An Association that has a building that needs to be painted in 5 years at a cost of \$5,000 will need to set aside \$1,000 into their reserve account annually to have enough in the reserve account to pay for painting in year 5. If the Association has \$1,000 in the reserve account at the end of year 1, they are on track to pay for this paint job and are considered to be 100% Fully Funded as the paint job has deteriorated by 1/5th and the amount in the reserve account is 1/5th of the total amount needed. At the end of year 2, this community would need \$2,000 in the reserve account to remain fully funded (i.e., 2/5th deterioration of the paint and 2/5th the total in the reserve account). This would go on each year until year 5 when the building is painted, and the process starts over again.

The fully funded balance is simple enough to determine if the community has only one common area component. Most communities have many components and a corresponding fully funded balance that ranges from one year to the next as components are repaired/replaced. The remaining useful life expectancies are updated over time and the common area component list grows or shrinks over time.

It is important to realize that a fully funded balance is not the total replacement cost of the common area components. A community that has a fully funded balance one year, but then decides against following recommended increases to offset inflation will very likely fall below a fully funded balance in a very short period. This is a common scenario when membership requests lower dues and/or the reserve account balance appears to be very large.

# Timeline of Expenses

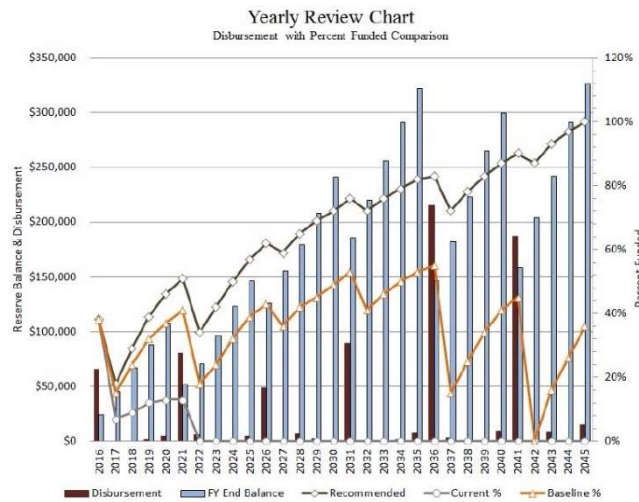
Description	Expenditures
<b>Replacement Year 2020 continued...</b>	
Bathroom- Refurbish	6,556
Elevator- Cab Refurbish	16,391
Entry Access System	3,825
Fencing- Wood- Replace	13,572
Kitchen- Refurbish	6,556
Landscape- 25% Refurbish Contingency	9,400
Mailbox Clusters- Replace	1,661
Retaining Wall-Masonry- 20% Conting.	3,734
<b>Total for 2020</b>	<b>\$63,225</b>
<b>Replacement Year 2021</b>	
Central Vacuum- Replace	1,970
Hot Water Heater/Tank- Replace	2,251
<b>Total for 2021</b>	<b>\$4,221</b>
<b>Replacement Year 2022</b>	
Concrete Surfaces- 3% Repair Contingency	4,039
Paint- Garage Walls/Ceiling	16,727
Paint- Wood Fencing	5,039
Paint/Seal- Ext. Wood Surfaces	7,871
Sump Pump- Garage- Replace	5,796
<b>Total for 2022</b>	<b>\$39,473</b>

The reserve study will include a schedule of projected expenses related to the common area components in the reserve study. This will include the expected year the project will need to be completed as well as the expected costs at that time (inflated costs based on inflation rate). This is one of the most valuable tools in the reserve study should a Board or property manager decide to utilize it properly. Most of the time "surprises" can be minimized as a review of the projected expenditures will provide a community many years of advance notice. This is especially helpful for large expense projects like roofing or roads that may require a Board to explore funding options ahead of time.

## *Cost Efficiencies*

When the reserve analyst creates a timeline of expenses, one of the goals is to ensure that components are timed appropriately for cost efficiency. An example of this would be to include a siding repair component being timed with the paint cycle of the building.

# About Funding Plans



The reserve analyst will likely be developing numerous funding models for a common interest community as there are several important considerations to be considered. These include:

- Statutory requirements
- Association goals
- Reserve analyst recommendations

Additionally, there may be "what if" scenarios or funding models that meet certain third- party requirements, such as for a Lender's guideline. It is important to notify the reserve analyst of any special requests so these funding models can be taken into consideration during the process of developing the reserve study.

Listed above are some examples of different funding scenarios on a comparison graph.

## ***Funding Strategies***

There are four basic funding strategies most commonly utilized and accepted in the reserve study industry. It is highly recommended the Association consult professionals to determine the best strategy or combination of plans that best suit the Association's need. Additionally, Associations should consult with their accountant to determine the

tax implications of selecting a plan. The four funding strategies and descriptions of each are detailed below.

### ***Full Funding Strategy***

Given the basis of funding for reserves is to distribute the costs of the replacements over the lives of the components in question, it follows that the ideal level of reserves would be proportionately related to those lives and costs. If an Association has a component with an expected estimated useful life of 10 years, it will set aside approximately one-tenth of the replacement cost each year (ignoring interest and inflation for this example). At the end of three years, one would expect three-tenths of the replacement cost to have accumulated, and if so, that component would be "fully-funded." This model is important in that it measures the adequacy of an Association's reserves at any one point in time and is independent of any method which may have been used for past funding or may be under consideration for future funding. The formula is based on current replacement cost, and is a measure in time, independent of future inflationary or investment factors. When an Association's total accumulated reserves for all components meet this criterion, then its reserves are "fully-funded."

### ***Baseline Funding Strategy***

The goal of this funding method is to keep the reserve cash balance above zero. This means that while each individual component may not be fully funded, the reserve balance overall does not drop below zero during the projected period. An Association using this funding method must understand this is a higher risk funding plan as even a minor reduction in a component's remaining useful life can result in a deficit in the reserve cash balance-- specifically in years when costs are substantial. Additionally, this funding model ignores all component expenses that fall outside the timeframe of the reserve study so when some of the larger expenses begin to fall within a future study the allocation rate may need significant revisions. Following this model can be difficult and often results in large fluctuations to the reserve allocation rates over time.

### ***Threshold Funding Strategy***

This method is based on the baseline funding concept. The minimum reserve cash balance for threshold funding, however, is set at any predetermined dollar or percent funded figure by the client or reserve analyst.

### ***Statutory Funding Strategy***

This method is based on local statutes and can include minimum dollar amounts in the reserve account and/or minimum percent funded figures that must be established.

# Updating the Reserve Study

It is very important for an Association to update its reserve study annually. Even though only a handful of state statutes require a reserve study to be performed annually, many do require annual disclosures to the community membership as well as buyers. Without annual updates to the reserve study, the mathematical calculations and funding models will not be accurate.

Many communities will try and update their reserve study in-house by a Board member who may have some experience in the construction industry or in finance. While this may seem like a good idea to save some money, it usually ends up changing the financial model from what was originally created by a designated reserve analyst and the study loses credibility. This often includes removing components, adjusting costs to unrealistic levels, or utilizing inaccurate mathematical formulas to come to reserve study calculations such as percent funded.

Whoever completes the reserve study update will need to be familiar with construction costs, component life expectancies, and be familiar with reserve study concepts. The research needed could involve calling vendors, purchasing cost manuals, taking classes and researching reserve study concepts so the reserve study update will remain credible. Annual disclosure requirements will also need to be completed utilizing the updated figures from the reserve study. It is important the person updating the reserve study can extrapolate this information from the study accurately and in line with industry / statutory accepted formulas.

## **\*\*Reserve Analyst Tip\*\***

Updates to reserve studies are typically inexpensive for years when a site visit is not required. The amount saved by doing it in house is typically only a few hundred dollars, but risks can be significant if data being updated are not accurate. Our tip is to establish a relationship with a reserve study company you trust and have them do annual updates. This is cost efficient and removes significant risk and liability from the Board.

# Definitions

## *Full Funded Balance (FFB)*

Total accrued deterioration. An indicator against which the fiscal year start balance can be compared. The balance that is in direct proportion to the fraction of life “used up” of the cost.

## *Funding Goals*

A) *Baseline Funding* - Maintaining a net reserve balance above zero for length of the study.

B) *Full Funding* - Maintaining a reserve balance at or near percent funded of 100%.

C) *Statutory Funding* - Maintaining a specified reserve balance/percent funded per statutes.

D) *Threshold Funding* - Establishing and maintaining a set pre-determined reserve balance or percent funded.

## *Funding Method (or Funding Plan)*

An association’s plan to provide income to the reserve fund to offset expected disbursements from that fund. The following represents two (2) basic methodologies used to fund reserves:

A. *Cash Flow Method* - A method of developing a reserve funding plan where allocations to the reserve fund are designed to offset the variable annual expenditures from the reserve fund. Different reserve funding plans are tested against the anticipated schedule of reserve expenses until the desired funding goal is achieved.

B. *Component Method* - The component method develops a reserve-funding plan where the total contribution is based on the sum of contributions for individual components. The component method is the more conservative (typically higher reserve account balance) of the two funding options and ensures the association will achieve and maintain an ideal level of reserves over time. This method also allows for computations on individual components in the analysis. However, this method also has limitations

with respect to variations in actual useful life of components and is much more time intensive to accurately follow this funding strategy.

### ***Percent Funded***

A comparison of the fully funded balance (ideal balance) to the fiscal year actual start balance expressed as a percentage and used to provide a “general indication” of reserve strength.

### ***Useful Life (UL)***

Total useful life or depreciable life. The estimated time, in years, that a reserve item can be expected to serve its intended function if properly constructed and maintained in its present application or installation.